5/16/00

EPA
United States
Environmental Protection
Agency

Office of Prevention, Pesticides, and Toxic Substances

SUBJECT: Section 18 for Use of Pyridate (PC # 128834; DP Bar Code: D264628) on mint in California
Environmental Fate and Effects Division

FROM: Fred Jenkins, Fisheries Biologist Fred J 5/17/00
Environmental Risk Branch 2
Environmental Fate and Effects Division (7507C)

THROUGH: Jean Holmes, Acting Chief Jean Holmes 5/16/00
Environmental Risk Branch 2
Environmental Fate and Effects Division (7507C)

TO: Barbara Madden (7505C)
Registration Division

Attached to this memo is the requested Section 18 for Pyridate use on mint in California (DP Bar Code: D264628). If there are any questions, please contact Fred Jenkins at (703) 308-9597.

2050407

Section 18 Review
Use of Pyridate (PC # 128834) on mint in California
Environmental Fate and Effects Division
Bar Code: D264628

I. Summary:

The level of concern for acute risk of pyridate is not expected to be exceeded for birds and mammals (including endangered species). **The level of concern has been exceeded for chronic risk to mammals. EFED has determined the chronic risk may primarily affect small vegetarian mammals. Small vegetarian mammals could possibly be exposed directly to pyridate because of their dietary behavior**. There are no endangered species of mammals in any of the counties of the proposed use. Therefore, there is no concern for chronic risk to endangered mammals species. Freshwater, marine, and estuarine fish and invertebrates (including endangered species) are not expected to be affected by the proposed use. Since there are no plant toxicity data available, no plant risk assessment can be done. Therefore, EFED assumes that terrestrial and aquatic non-target plants may be adversely affected from the labeled use of pyridate. Although it is expected that non-target plants may be adversely affected, EFED has determined that there is negligible risk to any of the endangered species of non-target plants inhabitating the counties of the proposed use (See Endangered Species Sec. VI).

The proposed use is not expected to pose significant risk to surface and ground water resources. For drinking water from surface water sources, the maximum expected concentrations are 97 μg/L for acute risk calculations and 75 μg/L for chronic risk and cancer risk calculations. Concentrations in ground water are not expected to exceed 4.44 μg/L. Modifications of label statements are not recommended.

II. Background

The California Department of Pesticide Regulation is requesting an Emergency Exemption for the use of pyridate to control kochia and redroot pigweed in mint. This exemption is for the use of Tough 5.0 EC herbicide ® (Registration # 100-880), containing 55.8% of active ingredient of pyridate. This exemption would allow use during April 1, 2000 through December 31, 2000 in the counties of Lassen, Modoc, Shasta, and Siskiyou. A total of 1,820 acres may be treated.

Application Rate:	0.9375
No. of Applications:	2
Application Method:	Ground

For general use, the maximum application rate for pyridate on any crop is 0.9375 lb. ai/A for mint.

III. Environmental Fate Summary

The major route of dissipation of parent pyridate is hydrolysis, which rapidly forms the terminal degradate CL-9673. Parent pyridate is not persistent in soil or water, but is very mobile. The metabolite CL-9673 is more persistent than parent pyridate. CL-9673 degrades slowly in aerobic soil and is essentially stable to hydrolysis, photolysis, and anaerobic soil metabolism. Therefore, the most significant route of dissipation of CL-9673 is dilution.

Pyridate hydrolyzes rapidly with half-lives of 67, 18, and 7 hours at pH 5, 7, and 9, respectively. Parent pyridate rapidly forms the terminal metabolite, CL-9673, which degrades slowly or is stable in the environment. CL-9673 is stable to hydrolysis, but degrades by photolysis (half-lives of 3.7-14 days) in shallow, well-mixed surface water with minimal shading or suspended sediment. However, this is unlikely to be a significant route of dissipation since photolysis only occurs near the top of surface water and most surface water has suspended sediment that prevents photolysis. Even though the soil photolysis half-life is 16 days, the half-lives in the field are more likely to be in the range of the aerobic soil (topsoil) metabolism study results (10-30 weeks). In the field, pyridate and CL-9673 are likely to move downward from the surface of the soil, based on the relatively low adsorption of pyridate to soil (0.3-3.5 ml/g). This downward movement is likely to prevent soil photolysis under most conditions. If CL-9673 moves from the topsoil to lower soil layers, it is persistent with calculated extrapolated half-lives of 330-630 days from the anaerobic soil metabolism study. The terrestrial field dissipation half-lives for CL-9673 range from 7-29 days, which is inconsistent with the laboratory data. The difference between the half-lives of 10-30 weeks in the laboratory and 7-29 days in the field indicate that movement in some field conditions in the form of leaching or runoff may be an important route of dissipation. Volatility is not expected to be a significant route of dissipation for either parent pyridate or CL-9673 since the vapor pressure of parent pyridate is 7.49×10^{-9} torr.

Accumulation in fish can occur, based on the bioaccumulation factor (BCF) of 464X, but depuration is rapid since >99 % of pyridate was depurated within 14 days.

IV. Water Resources Summary

A. Surface Water (Modeling and Monitoring)

It is EFED's understanding that the Mint use is the highest registered use rate for pyridate. Therefore, the estimated surface water drinking water concentrations and aquatic ecosystem exposure concentrations are the same (See attached memo: DP Barcode: D257833 Pyridate Drinking Water Exposure Considerations for FQPA Safety Factor Selection).

No monitoring data is available for pyridate at this time. The GENEEC model was used to estimate surface water concentrations for pyridate. This estimate is based on a

maximum application rate of 0.9 lb. ai/acre. The GENEEC values represent upper-bound estimates of the concentrations that might be found in surface water due to pyridate use (Table 1). The modeling results show that pyridate has the potential to move into surface waters, especially during times of unusually heavy rainfall.

For aquatic ecosystems, the maximum expected concentrations are 97 μg/L for acute risk calculations, and 75 μg/L for chronic risk calculations (See Table 1).

EFED recommends a peak Estimated Environmental Concentration (EEC) of 97 μg/L for calculating the acute risk values for human health from surface water exposure through drinking water. An EEC of 75 μg/L should be used for calculating the chronic and cancer risk values for human health considering the surface water as the source of drinking water.

Available data show that parent pyridate is not persistent. However, the metabolite CL-9673 does not degrade significantly. Therefore, most drinking water exposure is likely to be to the metabolite. While no anaerobic aquatic data are available for CL-9673, EFED predicts half-lives of 1.5-2.5 years in water for this metabolite.

Table 1.Tier I upper tenth percentile EEC's for pyridate.

Compound	Peak EEC	4 Day EEC	21 Day EEC	56 Day EEC
Pyridate	97 ppb	95 ppb	88 ppb	75 ppb

Input values used in the surface water model are given in Table 2.

Table 2. Surface Water Exposure Inputs for GENEEC for Pyridate.

DATA	VALUE
Application rate	0.9 lbs. ai/A (label; highest registered use)
Maximum number of application per year	2 (label)
Interval between applications	20 days (label)
Soil organic carbon coefficient (Koc)	3 (lowest computed for three soils)
Soil aerobic metabolism (maximum value)	210 days (MRID # 261527)
Solubility	1.5 ppm (one liner database)
Aerobic aquatic metabolism half life	75 days(EFGWB one liner, supplemental study)
Photolysis half life	14.1 days (MRID # 40939103)

B. Ground Water

Table 3 shows the input parameter values used in SCI-GROW for pyridate and the resulting estimated ground water concentration. EFED estimates a ground water drinking water exposure concentration of 4.44 ppb for pyridate as predicted by SCI-GROW modeling results (See attached memo: DP Barcode: D257833 Pyridate Drinking Water Exposure Considerations for FQPA Safety Factor Selection). There may be exceptional circumstances under which groundwater concentrations could exceed the SCI-GROW estimates. However, such exceptions should be quite rare since the SCI-GROW model is based exclusively on maximum groundwater concentrations from studies conducted at sites and under conditions which are most likely to result in groundwater contamination. The groundwater concentrations generated by SCI-GROW are based on the largest 90-day average recorded during the sampling period. The concentration (4.44 ppb)can be considered as both the acute and chronic values.

Table 3. SCI-GROW Environmental Fate Input Parameters for Pyridate/

Average K_{oc} (l/kg) [1]	64.5
Application rate (lb a.i./acre)	0.9
Number of applications per year	2
Use rate (maximum total/season)	1.8 lb ai/A
Aerobic soil metabolism half-life (days)(average)	105
Relative intrinsic leaching potential	4.9
Estimated groundwater concentration	4.44 ppb

V. Ecological Risk Assessment

A. Terrestrial Animals

Risk quotients indicate that the level of concern (LOC) for acute risk for the proposed use is not exceeded for terrestrial animals (Table 4). Risk quotients also indicate that the LOC for chronic risk is not exceeded for birds, **but the LOC for chronic risk is exceeded for mammals (Table 4). EFED has determined the chronic risk may primarily affect small vegetarian mammals. Small vegetarian mammals could possibly be exposed directly to pyridate because of their dietary behavior. The LOC exceedance is also applicable to endangered species of mammals. However, there are no endangered mammal species in any of the counties of the proposed use.**

Table 4. Toxicity and Risk Quotients for Terrestrial Wildlife [and Beneficial Insects].

Animal Group	Exposure Type	Most Sensitive Species	Toxicity	EEC (ppm)	Risk Quotient
Birds	Acute	Northern bobwhite and Mallard	LC_{50}= 1505 ppm[a]	432[b]	< 0.1[c]

Animal Group	Exposure Type	Most Sensitive Species	Toxicity	EEC (ppm)	Risk Quotient
Birds	Chronic	Northern bobwhite and Mallard	NOAEL= 640 ppm[a]	432	< 1[c]
Mammals	Acute	Rat / Mouse	LD_{50}=3544 mg/kg[a]	432	< 0.1[c]
Mammals	Chronic	Rat / Mouse	NOAEL= 216 ppm[a]	432	2[d]
Insects	Acute	Honeybee	No Record	NA	NA

[a] Sec 18 DP Barcode D244668

[b] The exposure for terrestrial animals is usually determined by the Kenaga/Fletcher nomogram. The highest terrestrial residue anticipated is determined by multiplying the residues found on short grass (240 ppm) after application of 1 lb ai/A with the application rate (0.9 x 2 applications) resulting in 432 ppm.

[c] The risk quotient does not exceed the level of concern.

[d] The risk quotient exceeds the level of concern.

B. Aquatic Animals

The risk quotient for freshwater fish cannot be calculated (Table 5) because the LC50 was not determined in the acute toxicity study (Accession no. 265681). Forty percent mortality was observed after 96 hrs. at 1200 ppb which was the highest concentration tested. However, EFED **predicts minimal risk to freshwater fish** because the exposure in the environment is predicted to be less than the 1200 ppb which is 12 times higher than the estimated peak environmental concentration of 97 ppb.

Although the LOC for endangered freshwater invertebrates is exceeded, EFED expects negligible risk to any endangered species of freshwater invertebrates listed in the counties of the proposed use (See Sec. VI Endangered Species).

Although the LOCs are exceeded for estuarine and marine fish and invertebrates, these species do not inhabit the counties of the proposed use. Therefore, there is no concern in California for estuarine and marine fish or invertebrates.

There are no chronic data available to provide chronic risk assessment for aquatic species.

Table 5. Toxicity and Risk Quotients for Aquatic Animals.

Animal Group	Exposure Type	Most Sensitive Species	Toxicity	EEC (ppb)	Risk Quotient
Freshwater Fish	Acute	Freshwater fish	LC_{50}= > 1200 ppb[a]	97 [b]	< 0.08[c]
	Chronic	Fathead minnow	No Record		
Freshwater Invertebrates	Acute	*Daphnia magna*	LC_{50}= 1080 ppb[a]	97	0.09[c]
	Chronic	*Daphnia magna*	No Record		
Estuarine/ Marine Fish	Acute	Sheepshead minnow/ Silverside	LC_{50} 300 ppb[a]	97	0.32[d]
	Chronic	Sheepshead minnow	No Record		
Estuarine/ Marine Invertebrates	Acute	Eastern oyster	LC_{50}= 145 ppb[a]	97	0.66[e]
	Chronic	Mysid	No Record		

[a] Sec 18 DP Barcode D244668
[b] Derived by GENEEC Model.
[c] The level of concern has been exceeded for endangered species.
[d] The level of concern has been exceeded for acute restricted use.
[e] The level of concern has been exceeded for acute high risk.

C. Terrestrial and Aquatic Plants

Since there are no plant toxicity data available, no plant risk assessment can be done. Therefore, a default assumption is that **terrestrial and aquatic non-target plants may be adversely affected from the labeled use of pyridate. Although it is expected that non-target plants may be adversely affected, EFED has determined that there is negligible risk to any of the endangered species of non-target plants inhabiting the counties of the proposed use (See Endangered Species Sec. VI).**

VI. Effects on Endangered Species

The following endangered species are listed in the counties of the proposed use.

County	Species
Modoc	**Plant: Truckee Barberry**
Shasta	**Invertebrate: Shasta Crayfish,** **Invertebrate: Vernal Pool Tadpole Shrimp** **Plant: Green's Tuctoria,** **Plant: Slender Orcutt Grass**
Siskiyou	**Plant: Slender Orcutt Grass;**

The LOC is exceeded for endangered species of plants and invertebrates, EFED has determined that **there is negligible risk to any endangered species of plants and invertebrates inhabiting the counties of the proposed use.** This determination is based upon the premise that none of the endangered species inhabit areas in close enough range to receive exposure to pyridate used on mint crops. This determination was made after consultation with the Modoc County Department of Agriculture, and the Siskiyou Department of Agriculture.

Although the LOC is exceeded for chronic risks to endangered species of mammals, there are no endangered mammal species in any of the counties of the proposed use. Therefore, there are no chronic risks to endangered species of mammals for the proposed use.

VII. Recommended Label Modifications

No additional labeling modifications are recommended.

DP Barcode: D257833
PC Code: 128834

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF PREVENTION, PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM: **Drinking Water Memorandum for Pyridate for IR-4 Tolerance Petition for Proposed Use on *Mint***

TO: **Robert Forrest, PM #05**
Registration Division (7505C)

FROM: **Subijoy Dutta, P.E.** *Subijoy Dutta* **10/4/99**
Environmental Engineer, Environmental Risk Branch II
Environmental Fate and Effects Division (7507C)

THRU: **Betsy Grim, Acting Branch Chief** *Betsy Grim* **10/4/99**
Environmental Risk Branch II,
Environmental Fate and Effects Division (7507C)

A Summary report on Pyridate Drinking Water Exposure Considerations for FQPA safety factor Selection is attached. This report was sent in advance to the FQPA safety factor committee on September 28, 1999.

Attachment: Pyridate FQPA DW exposure analysis
(Pyridatefqpa.dw.wpd)

PC Code: 128834 **DP Barcode: D257833**

Pyridate Drinking Water Exposure Considerations for FQPA Safety Factor Selection

1) Is the environmental fate database complete enough to characterize drinking water exposure?

The EFGB one liner database for this product has been partially completed. The estimated environmental concentrations for the use of pyridate on garbanzo beans have been determined in the past for Idaho (Memo: Pyridate Environmental Fate Characteristics and Estimated Ground Water and Surface Water Concentrations Resulting from Proposed Use on Garbanzo Beans: Chemical No. 128834; DP Barcode D223398; Case 287340; ID 6E04667). The application rate of 0.9 lbs./acre and number of application (2 applications) for the Garbanzo bean use are equal to the application of rate and number of applications for the proposed use on mint for this IR-4.

A) Provide a brief summary of the environmental fate assessment for this compound and any metabolite that may potentially get into drinking water based on metabolite fate characteristics.

Pyridate hydrolyzes rapidly with half lives of 66.7, 17.8, and 6.8 hours at pH 5, 7, and 9, respectively. The degradate, CL-9673, appears to be stable to hydrolysis with a reported half life of >35 days (>95% remained as CL-9673 after 35 days).

Pyridate does not undergo any significant aqueous or soil photolysis, but is rapidly hydrolyzed to CL-9673, which is in turn readily photolyzed in water with a half life of 3.7 to 14 days and on soil with a half life of 16 days. These half lives indicate that pyridate and its primary degradate will be short lived in the environment when exposed to sunlight. CL-9673 has terrestrial field dissipation half lives of 7-29 days.

In anaerobic conditions, the degradate is persistent with a half life for anaerobic soil metabolism of 330-630 days. The soil partition coefficient (K_d) for CL-9673 is 0.3-3.5, indicating that it has low adsorption potential in soil.

Neither pyridate nor CL-9673 is volatile, with a vapor pressure for pyridate of 7.49×10^{-9}, and a Henry's Constant of 2.49×10^{-9}, meaning pyridate is less volatile than water. A fish study indicated that pyridate bioaccumulates (464 times), but 99% of residues were eliminated in 14 days.

B) Is the compound or any of its metabolites mobile and persistent? (A bottom line summary statement on drinking water exposure potential should be included.)

In summary, the data indicate that in terrestrial and aquatic environments, pyridate rapidly hydrolyzes to CL-9673 with half lives usually $\leq$3 days. Although pyridate is also rapidly hydrolyzed under anaerobic soil conditions to CL-9673, its degradate is persistent and undergoes very little degradation with half lives from 330-630 days in anaerobic soil conditions. Aerobic half lives of CL-9673 are about 10-30 weeks in soils. CL-9673 is rapidly degraded under the influence of light as indicated by the 14 day half life in the water and 16 day half life in soil. In general, pyridate and its primary degradate, CL-9673, will not persist in aerobic conditions, while CL-9673 will persist in anaerobic conditions. Although the major metabolite of pyridate, CL-9673 is very persistent in anaerobic soil conditions, its leaching and mobility to groundwater is somewhat limited by the low solubility (1.5 ppm) of the product. However, The modeling results indicate that pyridate has the potential to move into surface waters, especially during times of unusually heavy rainfall.

2) Discuss method for drinking water exposure assessment (ex. monitoring data, modeling, combination).

A search was conducted using the USGS National Water Quality Assessment (NAWQA) database. No monitoring data were found for Pyridate.

The Generic Estimated Environmental Concentration (GENEEC) model was used to estimate surface water concentrations for pyridate. The model run for Garbanzo beans (chick peas) were used for the mint because of the same application rate. The modeling results indicate that pyridate has the potential to move into surface waters, especially during times of unusually heavy rainfall.

The SCI-GROW model was run to estimate the ground water concentrations due to possible leaching. The predicted concentration in the ground water due to Pyridate application in mint is not expected to be very high. However, the estimated concentration by the model may exceed in certain circumstances where the karst formation exist or where the local geology is marked by highly permeable sand.

A) If models are used, discuss which models, describe estimated environmental concentrations (EECs) and scenarios used..

The peak GENEEC estimated environmental concentration (EEC) of pyridate in surface water is 96.72 ppb (Table 1). This estimate is based on a maximum application rate of 0.9 lb ai/acre. The GENEEC values represent upper-bound estimates of the concentrations that might be found in surface water due to pyridate use.

GENEEC (USEPA, 1995) is a screening model designed by the Environmental Fate and Effects Division (EFED) to estimate the concentrations found in surface water for use in ecological risk assessment. As such, it provides upper-bound values on the concentrations that might be found in ecologicaly sensitive environments because of the use of a pesticide. It was designed to be simple to use and to only require data which is typically available early in the pesticide registration process. GENEEC is a single event model (one runoff event), but can account for spray drift from multiple applications. GENEEC is hardwired to represent a 10-hectare field immediately adjacent to a 1-hectare pond that is 2 meters deep with no outlet. The pond receives a spray drift event from each application plus one runoff event. The runoff event moves a maximum of 10% of the applied pesticide into the pond. This amount can be reduced due to degradation on the field and the effects of soil binding in the field. Spray drift is equal to 1 and 5% of the applied rate for ground and aerial spray application, respectively.

GENEEC is not an ideal tool for drinking water risk assessments. Surface water sources of drinking water tend to come from bodies of water that are substantially larger than a 1-hectare pond. Furthermore, GENEEC assumes that essentially the whole basin receives an application of the chemical. In virtually all cases, basins large enough to support a drinking water facility will contain a substantial fraction of area that does not receive the chemical. Furthermore, there is always at least some flow (in a river) or turn over (in a reservoir or lake) of the water so the persistence of the chemical near the drinking water facility is usually over estimated by GENEEC. Given all this, GENEEC does provide an upper bound on the concentration of pesticide that could be found in drinking water and therefore can be appropriately used in screening calculations. If a risk assessment performed using GENEEC output does not exceed the level of concern, then one can be reasonably confident that the risk will also be below the level of concern. However, since GENEEC can substantially overestimate true drinking water concentrations, it will be necessary to refine the GENEEC estimate if the level of concern is exceeded. The input values for GENEEC are listed in Table 2. GENEEC version 1.2 was used for the calculations.

Table 1. GENEEC EECs (µg/L) for Pyridate Use on Garbanzo Beans

Crop	Peak GEEC	4 Day GEEC	21 Day GEEC	56 Day GEEC
Garbanzo beans	96.72	95.33	87.90	74.93

Table 2. GENEEC Environmental Fate Input Parameters for Pyridate

DATA	VALUE
Application rate	0.9 lb ai/A (label)
Maximum number of application per year	2 (label)
Interval between applications	20 days (label)
Soil organic carbon coefficient (Koc)	3 (lowest computed for three soils)
Soil aerobic metabolism (maximum value)	210 days (261827)
Solubility	1.5 ppm (one liner database)
Aerobic aquatic metabolism half life	75 days(one liner, supplemental study)
Photolysis half life	14.1 days(40939103)

The predicted concentration in the ground water due to Pyridate application in mint is expected to be 4.44 ppb as estimated by the SCI-GROW model. This EEC of 4.4 ppb may be used for peak and chronic estimates in groundwater.

B) If monitoring data are used (ground water or surface water), describe the monitoring data and state if the data were collected from vulnerable areas at maximum label rates.

No monitoring data were available for Pyridate.

3) Please discuss extent of population potentially exposed to the pesticide via drinking water based on extent of usage and based on if chemical characteristics indicate a likelihood of drinking water contamination.

The following Table provides an estimate of population exposed at the predicted concentration levels for Pyridate.

POTENTIAL MAXIMUM POPULATION EXPOSED THROUGH DRINKING WATER DUE TO PYRIDATE APPLICATION IN MINT

September 27, 1999

REGION	STATE	GROUND WATER		SURFACE WATER		Pyridate Usage[1]	REMARKS
		Population Served	Predicted Concentration (ppb)	Population Served	Predicted Concentration (ppb)		
	IDAHO	73,640	4.44	4,380	96.7		Assuming 10% of the total population served for the State live in the Mint producing areas where Pyridate is used.
	INDIANA	216,673	4.44	211,753	96.7		Assuming 10% of the total population served for the State live in the Mint producing areas where Pyridate is used.
	MONTANA	24,020	4.44	40.506	96.7		Assuming 10% of the total population served for the State live in the Mint producing areas where Pyridate is used.
	OREGON	37,351	4.44	177,208	96.7		Assuming 10% of the total population served for the State live in the Mint producing areas where Pyridate is used.
	Washington	229,900	4.44	212,800	96.7		Assuming 10% of the total population served for the State live in the Mint producing areas where Pyridate is used.
	WISCONSIN	202,301	4.44	153,523	96.7		Assuming 10% of the total population served for the State live in the Mint producing areas where Pyridate is used.

Note: 1 - No Pyridate Usage Data is Available.

DP BARCODE: D264628

CASE: 292860 DATA PACKAGE RECORD DATE: 05/17/00
SUBMISSION: S577308 BEAN SHEET Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: EMERGENCY EXEMP ACTION: 510 SEC18-OC F/F USE
RANKING : 5 POINTS ()
CHEMICALS: 128834 Pyridate %

ID#: 00CA0015
COMPANY:
PRODUCT MANAGER: 05 ROBERT FORREST 703-308-9376 ROOM: CM2 248
PM TEAM REVIEWER: BARBARA MADDEN 703-305-6463 ROOM: CM2 278
RECEIVED DATE: 03/23/00 DUE OUT DATE: 05/12/00

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 264628 EXPEDITE: N DATE SENT: 03/30/00 DATE RET.: 05/17/00
CHEMICAL: 128834 Pyridate
DP TYPE: 001
CSF: N LABEL: Y

ASSIGNED TO	DATE IN	DATE OUT	ADMIN DUE DATE: 04/19/00
DIV : EFED	03/30/00	05/17/00	NEGOT DATE: / /
BRAN: ERB2	03/30/00	05/17/00	PROJ DATE: / /
SECT: IO	03/30/00	05/17/00	
REVR : FJENKINS	03/30/00	05/17/00	
CONTR:	/ /	/ /	

* * * DATA REVIEW INSTRUCTIONS * * *

Please review the specific emergency exemption request for use of pyridate on mint to control weeds in California. This is the first time California has requested this use. However, EFED conducted a review for the same use for several states in 1999 (ID, IN, MT, OR, WA, and WI) and did require additional restrictions for some of the states due to concerns for freshwater invertebrates, terrestrial and aquatic non-target plants.

A tolerance has been established for this use so drinking water estimates are NOT needed.

Please let me know if you need any additional information.

Thank you
Barbara Madden
305-6463

* * * DATA PACKAGE EVALUATION * * *

No evaluation is written for this data package

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL